

What is claimed is:

1. A mechanism that can maintain a constant force comprising:
an input groove;
an output groove;
said input groove operably coupled to said output groove;
an input cable secured to said input groove;
an output cable secured to said output groove;
said input cable adapted to be secured to a source of force; and
said output cable adapted output a constant force.
2. The mechanism of claim 1 wherein said input groove spirals outwardly in a direction that is opposite to a direction that said output groove spirals outwardly.
3. The mechanism of claim 1 wherein said input groove and said output groove are positioned back-to-back.
4. The mechanism of claim 1 wherein said input groove spirals outwardly with an ever increasing radius and the output groove spirals outwardly with an ever increasing radius.
5. The mechanism of claim 1 wherein said input groove spirals outwardly in a counter-clockwise manner and said output groove spirals outwardly in a clockwise manner.
6. The mechanism of claim 1 wherein said input groove spirals outwardly in a counter-clockwise manner and said output groove spirals outwardly in a clockwise manner and said input groove is mounted on a back of said output groove.
7. The mechanism of claim 1 wherein said input groove spirals outwardly and said output groove spirals outwardly, in a manner such that said output cable produces a constant output force.

8. The mechanism of claim 1 in combination with a linear extension spring to provide a source of force.
9. The mechanism of claim 1 wherein said shape of at least one of the input groove and the output groove is defined by a torque profile.
10. The mechanism of claim 1 wherein said shape of at least one of the input groove and the output groove is defined by a torque profile which is parabolic.
11. The mechanism of claim 1 wherein said shape of at least one of the input groove and the output groove is defined by a torque profile that is a composite of a line, a constant, and a curve that is tangent to the line and the constant.
12. The mechanism of claim 1 wherein said input groove and said output groove are torsionally coupled together.
13. The mechanism of claim 1 wherein said input groove is phased relative to said output groove.
14. A mechanism that can maintain a constant force comprising:
 - an input groove;
 - an output groove;
 - said input groove operably coupled to said output groove; and
 - wherein said input groove spirals outwardly in a counter-clockwise manner and said output groove spirals outwardly in a clockwise manner and said input groove is operably coupled to a back of said output groove.
15. The mechanism of claim 14 including an adjustable spring end plug operably connected to a cable mounted in said input groove.
16. The mechanism of claim 14 including an adjustable spring end plug

operably connected to a cable mounted said input groove, which adjustable spring end plug has an adjustable spring constant.

17. A spring end plug comprising:

a plug;

a thread described on said plug;

said plug adapted to be mounted onto a spring with said thread adapted to be screwed on to the spring; and

a mechanism that is adapted to allow a load to be applied through the plug.

18. The spring end plug of claim 17 wherein said plug has a flat side adapted to be located away from a spring and said mechanism is located in a center of said flat side.

19. The spring end plug of claim 17 which can be used to adjust the spring constant of a spring by rotating the end plug relative to a spring.

20. The spring end plug of claim 17 having a cylindrical wall with said thread mounted on one of an inside of said cylindrical wall and an outside of said cylindrical wall.

21. A device comprising at least two eccentric pulleys that are operatively associated together in order to provide a constant force mechanism